

## GSTK1 Protein, Human, Recombinant

### General Information

Synonyms:	glutathione S-transferase $\kappa$ 1; GST; glutathione S-transferase kappa 1; GSTK1-1; GST13-13; GST13; hGSTK1
Protein Construction:	A DNA sequence encoding the mature form of human GSTK1 (Q9Y2Q3-1) (Gly2-Leu226) was expressed with a N-terminal Met. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q9Y2Q3-1
Molecular Weight:	25.5 kDa (predicted); 25 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 50 mM Tris, 10% glycerol, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

GSTK1 gene encodes a member of the kappa class of the glutathione transferase superfamily of enzymes that function in cellular detoxification. Glutathione S-transferases (GSTs) are a family of enzymes that catalyze a variety of reactions in both eukaryotes and prokaryotes. They catalyze the conjugation of reduced glutathione with potentially toxic, xenobiotic substrates, thus aiding excretion from the body. GSTK1 (glutathione S-transferase

kappa 1) is localized to the peroxisome and catalyzes the conjugation of glutathione to a wide range of hydrophobic substrates facilitating the removal of these compounds from cells. GSTK1 functions in cellular detoxification.

### Reference

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Morel F,et al.(2004) Gene and protein characterization of the human glutathione S-transferase kappa and evidence for a peroxisomal localization. *J Biol Chem.* 279(16): 16246-53.

Jowsey IR,et al.(2003) Biochemical and genetic characterization of a murine class Kappa glutathione S-transferase. *Biochem J.* 373(Pt 2):559-69.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481